

Table S1. Fish IDs for the 60 transmitters deployed, broken into a) known failed transmitters and b) transmitters suspected to be functioning properly. Information about each individual, date of implantation, date of most recent detection, recapture occurrences (-- represents never recaptured), and possible fate of the fish (Y is an apparent mortality, N is likely alive) is shown.

a)	Fork length	Sex	Application	Last	Last	Apparent
Fish ID	(mm)		date	detection	recapture	mortality
13-010	1918	Female	Aug 2013	Sep 2013	--	Failed
14-042	2064	Female	Sep 2016	Sep 2016	2022	Failed
16-025	2002	Female	Sep 2016	Sep 2016	--	Failed
16-040	1994	Female	Sep 2016	Nov 2016	--	Failed
14-017	1661	Male	Sep 2014	Aug 2016	2018	Failed
14-030	1702	Male	Aug 2014	Apr 2015	2019	Failed
14-035	1588	Male	Sep 2014	Sept 2014	2018	Failed
b)	Fork length	Sex	Application	Last	Last	Apparent
Fish ID	(mm)		date	detection	recapture	mortality
14-012	2057	Female	Aug 2014	Oct 2014	--	Y
14-023	1810	Female	Sep 2014	Nov 2020	2016	N
14-034	2045	Female	Sep 2014	Mar 2021	2015	N
14-037	1854	Female	Sep 2014	Oct 2020	2016	N
14-054	1829	Female	Sep 2014	Nov 2021	2017	N
15-010	2025	Female	Aug 2015	Nov 2021	2017	N
15-011	1950	Female	Aug 2015	Aug 2022	2018	N
15-035	1890	Female	Sep 2015	Sept 2021	--	N
15-048	2225	Female	Sep 2015	Sept 2021	2021	N
16-008	2045	Female	Sep 2016	Sept 2022	2022	N
16-009	1921	Female	Sep 2016	Nov 2021	2021	N
16-010	1609	Female	Sep 2016	Aug 2022	2020	N
16-013	1915	Female	Sep 2016	Aug 2022	--	N
16-020	2045	Female	Sep 2016	Sept 2022	--	N
16-023	2105	Female	Sep 2016	Sept 2021	2021	N
16-027	1930	Female	Sep 2016	Sept 2022	2022	N
13-002	1627	Male	Aug 2013	Sept 2020	2021	N
13-003	1570	Male	Aug 2013	July 2022	2016	N
13-004	1550	Male	Aug 2013	Aug 2022	2016	N
13-005	1330	Male	Aug 2013	Nov 2019	--	N
13-007	1543	Male	Aug 2014	Aug 2022	2020	N
13-009	1345	Male	Aug 2013	Apr 2020	2016	N
13-012	1562	Male	Sep 2013	Sept 2022	2019	N
13-013	1651	Male	Sep 2013	May 2020	2022	N
13-015	1524	Male	Sep 2013	Oct 2021	2020	N
14-002	1613	Male	Aug 2014	Sept 2022	2021	N
14-004	1607	Male	Aug 2014	Sept 2020	2016	N
14-007	1537	Male	Aug 2014	Oct 2019	--	N
14-008	1486	Male	Aug 2014	Sept 2022	2018	N
14-009	1607	Male	Sep 2014	Aug 2021	--	N

14-013	1715	Male	Sep 2014	Oct 2021	2016	N
14-015	1594	Male	Sep 2016	Aug 2022	2017	N
14-020	1511	Male	Sep 2014	Sept 2022	2018	N
14-024	1581	Male	Sep 2014	Aug 2018	2016	Y
14-026	1746	Male	Sep 2014	Aug 2022	--	N
14-028	1524	Male	Sep 2014	Sept 2022	2020	N
14-029	1394	Male	Sep 2014	May 2021	2019	N
14-031	1575	Male	Aug 2014	Jan 2018	2017	Y
14-032	1702	Male	Sep 2014	Nov 2017	2015	Y
14-036	1695	Male	Sep 2014	Oct 2020	--	N
14-043	1649	Male	Sep 2014	Sept 2022	2020	N
14-050	1715	Male	Sep 2014	May 2015	--	Y
16-039	1683	Male	Sep 2016	Nov 2021	--	N
16-042	1486	Male	Oct 2016	Sept 2022	--	N
13-006	1290	Unknown	Aug 2013	Sept 2021	2021	N
13-008	1340	Unknown	Aug 2013	Mar 2020	--	N
13-011	1250	Unknown	Aug 2013	Apr 2020	--	N
14-003	1295	Unknown	Aug 2014	Nov 2021	--	N
14-010	1854	Unknown	Aug 2014	Sept 2022	2022	N
14-014	1724	Unknown	Sep 2014	Oct 2021	--	N
14-022	1934	Unknown	Sep 2014	Jul 2020	--	N
14-025	1803	Unknown	Sep 2014	Oct 2021	2021	N
14-038	1664	Unknown	Sep 2014	Oct 2020	--	N

Table S2. Output of the most parsimonious model (phi [season], p [monthly*sex], with length covariate).

Model: phi (seasonal) p (monthly*sex)					
	Parameter	Real estimate	SE	lower 95% CI	upper 95% CI
summer 2013	1:Phi	1	0	1	1
fall 2013	2:Phi	1	0	1	1
winter 2014	3:Phi	1	0	1	1
spring 2014	4:Phi	1	0	1	1
summer 2014	5:Phi	1	0	1	1
fall 2014	6:Phi	1	1.03E-12	1	1
winter 2015	7:Phi	1	0	1	1
spring 2015	8:Phi	0.9998369	1.63E-04	0.9988432	0.999977
summer 2015	9:Phi	1	0	1	1
fall 2015	10:Phi	1	0	1	1
winter 2016	11:Phi	1	0	1	1
spring 2016	12:Phi	1	0	1	1
summer 2016	13:Phi	1	0	1	1
fall 2016	14:Phi	1	0	1	1

winter 2017	15:Phi	1	2.64E-09	1	1
spring 2017	16:Phi	1	6.03E-09	1	1
summer 2017	17:Phi	1	8.50E-11	1	1
fall 2017	18:Phi	1	0	1	1
winter 2018	19:Phi	0.9926307	0.0051038	0.9716814	0.9981124
spring 2018	20:Phi	1	0	1	1
summer 2018	21:Phi	0.9936716	0.0027663	0.9851406	0.9973181
fall 2018	22:Phi	0.9991703	2.28E-04	0.9985786	0.9995158
winter 2019	23:Phi	1	0	1	1
spring 2019	24:Phi	0.9807484	0.0081542	0.9562382	0.9916507
summer 2019	25:Phi	1	0	1	1
fall 2019	26:Phi	1	0	1	1
Male, August 2013	27:p	0.9982589	0.0011071	0.9939581	0.9994998
Male, September 2013	28:p	1	0	1	1
Male, October 2013	29:p	0.6488353	0.0202928	0.6081066	0.6875063
Male, November 2013	30:p	0.1159697	0.0672997	0.0349654	0.3220163
Male, December 2013	31:p	6.37E-86	4.34E-86	-2.15E-86	1.49E-85
Male, January 2014	32:p	5.03E-86	0	5.03E-86	5.03E-86
Male, February 2014	33:p	7.52E-86	1.50E-85	-2.18E-85	3.69E-85
Male, March 2014	34:p	0.5263134	0.0702968	0.3900014	0.6588128
Male, April 2014	35:p	0.3735287	0.1438473	0.1516193	0.6654641
Male, May 2014	36:p	0.9686002	0.0172527	0.9102926	0.9894486
Male, June 2014	37:p	0.9995165	5.24E-04	0.9959714	0.9999422
Male, July 2014	38:p	0.9822536	0.0122075	0.9334575	0.9954419
Male, August 2014	39:p	0.9885146	0.0077041	0.9579176	0.9969365
Male, September 2014	40:p	0.9505757	0.018761	0.8978853	0.9767814
Male, October 2014	41:p	0.6251471	0.051034	0.5211388	0.7187564
Male, November 2014	42:p	0.0211188	0.0154753	0.0049497	0.0855651
Male, December 2014	43:p	0.0286604	0.0144077	0.0105865	0.0752445
Male, January 2015	44:p	2.44E-88	3.49E-88	-4.40E-88	9.28E-88
Male, February 2015	45:p	0.0211185	0.017487	0.0040935	0.101718
Male, March 2015	46:p	0.7494852	0.0727033	0.5834417	0.864692
Male, April 2015	47:p	0.6097605	0.0618241	0.4842713	0.7222294
Male, May 2015	48:p	0.880618	0.0362664	0.7895407	0.9355009
Male, June 2015	49:p	0.6855877	0.0589203	0.5606562	0.7884016
Male, July 2015	50:p	0.9685943	0.0167464	0.9129217	0.9890982
Male, August 2015	51:p	0.9685938	0.0169259	0.911998	0.9892219
Male, September 2015	52:p	0.9586256	0.0317289	0.8284801	0.9910825
Male, October 2015	53:p	0.4514216	0.0382847	0.3780247	0.5269947
Male, November 2015	54:p	0.3790518	0.0348481	0.3135092	0.4493281
Male, December 2015	55:p	0.3686216	0.0624945	0.2564642	0.4970395
Male, January 2016	56:p	0.237523	0.0891564	0.1061016	0.4498142
Male, February 2016	57:p	0.3418037	0.0359946	0.2751085	0.4154022

Male, March 2016	58:p	0.7277495	0.0349518	0.6541823	0.7906743
Male, April 2016	59:p	0.5184656	0.0316055	0.4565526	0.5798168
Male, May 2016	60:p	0.9197609	0.0335411	0.8246708	0.96544
Male, June 2016	61:p	0.6964487	0.0693304	0.5467801	0.8135459
Male, July 2016	62:p	0.924794	0.0400326	0.7991798	0.9743569
Male, August 2016	63:p	0.947714	0.0234727	0.8774908	0.9786635
Male, September 2016	64:p	0.9125744	0.0322194	0.8254839	0.9583938
Male, October 2016	65:p	0.5920052	0.0817721	0.4276856	0.7380431
Male, November 2016	66:p	0.4389841	0.0866608	0.2819161	0.6093082
Male, December 2016	67:p	0.2750612	0.0657742	0.1658109	0.4200483
Male, January 2017	68:p	0.285881	0.0385601	0.2165857	0.3669619
Male, February 2017	69:p	0.4409026	0.0736052	0.3051823	0.5860697
Male, March 2017	70:p	0.632923	0.0933201	0.4396723	0.7911789
Male, April 2017	71:p	0.5513966	0.0367789	0.4787351	0.6219283
Male, May 2017	72:p	0.8136551	0.0799157	0.6084654	0.9246317
Male, June 2017	73:p	0.8111324	0.0809114	0.6040103	0.923619
Male, July 2017	74:p	0.9852481	0.0162967	0.8812017	0.9983398
Male, August 2017	75:p	0.9980828	0.0020144	0.9851039	0.9997561
Male, September 2017	76:p	0.9718358	0.0216776	0.8796197	0.9939005
Male, October 2017	77:p	0.6300079	0.0606397	0.5055904	0.7392626
Male, November 2017	78:p	0.3684518	0.0726637	0.2403222	0.5182882
Male, December 2017	79:p	0.321981	0.1088875	0.1515771	0.557968
Male, January 2018	80:p	0.2047533	0.0785075	0.0909697	0.3984708
Male, February 2018	81:p	0.1992241	0.0936414	0.0729922	0.4401157
Male, March 2018	82:p	0.7026189	0.0312767	0.6379346	0.7600931
Male, April 2018	83:p	0.4114757	0.1355021	0.1892973	0.6767435
Male, May 2018	84:p	0.9090218	0.0292118	0.8333331	0.9523051
Male, June 2018	85:p	0.8474605	0.0460016	0.7344556	0.91776
Male, July 2018	86:p	0.9735765	0.02963	0.7940032	0.9971688
Male, August 2018	87:p	1	0	1	1
Male, September 2018	88:p	0.9777462	0.0144941	0.9225219	0.9938697
Male, October 2018	89:p	0.4710181	0.18512	0.17189	0.7925189
Male, November 2018	90:p	0.35431	0.0397981	0.2806756	0.4355648
Male, December 2018	91:p	0.2142538	0.090379	0.0869301	0.4385037
Male, January 2019	92:p	0.0586241	0.0277445	0.0227195	0.1429697
Male, February 2019	93:p	0.3455854	0.0753886	0.2155378	0.5037149
Male, March 2019	94:p	0.5609948	0.0981615	0.3691159	0.7362198
Male, April 2019	95:p	0.3603343	0.1601342	0.1261306	0.6873559
Male, May 2019	96:p	0.323859	0.1526128	0.1088926	0.6524704
Male, June 2019	97:p	0.3569968	0.0374863	0.2873073	0.4333126
Male, July 2019	98:p	0.9911764	0.0113002	0.8992568	0.9992931
Male, August 2019	99:p	1	0	1	1
Male, September 2019	100:p	1	0	1	1

Female, August 2013	101:p	0.0027916	0.0011355	0.001257	0.0061884
Female, September 2013	102:p	0.0141954	0.0055655	0.0065609	0.0304418
Female, October 2013	103:p	0.0067459	0.0027355	0.0030419	0.014893
Female, November 2013	104:p	0.003387	0.0014743	0.0014417	0.0079362
Female, December 2013	105:p	0.016742	0.005873	0.0083906	0.0331281
Female, January 2014	106:p	0.0265357	0.0079179	0.0147282	0.0473541
Female, February 2014	107:p	8.42E-04	4.43E-04	3.00E-04	0.0023625
Female, March 2014	108:p	0.0013439	5.47E-04	6.05E-04	0.0029834
Female, April 2014	109:p	2.72E-04	1.73E-04	7.82E-05	9.48E-04
Female, May 2014	110:p	0.0042143	0.0020091	0.0016532	0.0107008
Female, June 2014	111:p	0.0106835	0.0045259	0.0046437	0.0243866
Female, July 2014	112:p	0.0026065	0.0011174	0.0011242	0.0060316
Female, August 2014	113:p	1	0	1	1
Female, September 2014	114:p	1	0	1	1
Female, October 2014	115:p	0.590202	0	0.590202	0.590202
Female, November 2014	116:p	0.4163144	0.1355101	0.1929524	0.6802881
Female, December 2014	117:p	0.0326846	0.0323279	0.0045334	0.2004466
Female, January 2015	118:p	0.1129294	0.0460835	0.0491347	0.2387554
Female, February 2015	119:p	0.6195043	0.1838274	0.2609418	0.8824636
Female, March 2015	120:p	0.6743349	0.1237075	0.4070354	0.8619938
Female, April 2015	121:p	0.4821472	0.2725156	0.0987945	0.8877347
Female, May 2015	122:p	1	0	1	1
Female, June 2015	123:p	0.5611113	0.2275227	0.1729081	0.886603
Female, July 2015	124:p	0.6754833	0.1114005	0.4346308	0.8493056
Female, August 2015	125:p	0.8085211	0.1154107	0.494824	0.9479237
Female, September 2015	126:p	0.8389191	0.1322473	0.4334166	0.9725709
Female, October 2015	127:p	0.3812382	0.3183468	0.0419122	0.896671
Female, November 2015	128:p	0.3491751	0.0674304	0.2307216	0.489728
Female, December 2015	129:p	0.4167266	0.0536382	0.3167504	0.5240553
Female, January 2016	130:p	0.0787378	0.0383523	0.0294288	0.1941397
Female, February 2016	131:p	0.3396051	0.1912596	0.088142	0.7323202
Female, March 2016	132:p	0.3416408	0.3480141	0.0243963	0.915029
Female, April 2016	133:p	0.2262739	0.1930769	0.0325773	0.7174962
Female, May 2016	134:p	0.7478214	0.1439816	0.3990547	0.9297894
Female, June 2016	135:p	0.4412214	0.3044968	0.0655641	0.8988492
Female, July 2016	136:p	0.5901683	0.1144824	0.3628417	0.7845487
Female, August 2016	137:p	0.412823	0.1677681	0.1533133	0.7318899
Female, September 2016	138:p	0.7159927	0.116428	0.4507741	0.8856323
Female, October 2016	139:p	0.4390462	0	0.4390462	0.4390462
Female, November 2016	140:p	0.5885461	0.0438215	0.5008186	0.6709847
Female, December 2016	141:p	0.3404185	0.1175053	0.15615	0.5900804
Female, January 2017	142:p	0.4753114	0.0802474	0.3253019	0.6299127
Female, February 2017	143:p	0.7159525	0.1143618	0.4556838	0.8835696

Female, March 2017	144:p	0.5102057	0.1089874	0.3070412	0.7100539
Female, April 2017	145:p	0.6302684	0	0.6302684	0.6302684
Female, May 2017	146:p	0.6570406	0.0513588	0.5506786	0.7496703
Female, June 2017	147:p	0.170953	0.0064381	0.1587013	0.1839438
Female, July 2017	148:p	0.2274997	0.0523983	0.141018	0.3456749
Female, August 2017	149:p	0.4220419	0.0720164	0.2904761	0.5656879
Female, September 2017	150:p	0.5374522	0	0.5374522	0.5374522
Female, October 2017	151:p	0.6355195	0.0881805	0.4525981	0.7861913
Female, November 2017	152:p	0.4655364	0.2380912	0.1177804	0.8503657
Female, December 2017	153:p	0.1489812	0.127475	0.0238166	0.5567641
Female, January 2018	154:p	0.2441599	0.1486565	0.0624539	0.6103599
Female, February 2018	155:p	0.1567037	0.033226	0.1019479	0.2332307
Female, March 2018	156:p	0.7373193	0.1492494	0.3826552	0.9270651
Female, April 2018	157:p	0.6300913	0.0962693	0.4312027	0.7928454
Female, May 2018	158:p	0.5785679	0.0566627	0.4654091	0.6840354
Female, June 2018	159:p	0.59156	0.1588474	0.2853339	0.8401026
Female, July 2018	160:p	0.5915601	0.1562624	0.2896292	0.8372657
Female, August 2018	161:p	0.6312774	0.0720023	0.4828587	0.7584121
Female, September 2018	162:p	0.6312764	0.058976	0.5102715	0.7377488
Female, October 2018	163:p	0.2646498	0	0.2646498	0.2646498
Female, November 2018	164:p	0.2564429	0.1387424	0.0765146	0.5894262
Female, December 2018	165:p	0.0497672	0.0287912	0.0156328	0.1472832
Female, January 2019	166:p	0.0497662	0.0214332	0.0210886	0.1129422
Female, February 2019	167:p	0.2657857	0.0651933	0.1583036	0.4106409
Female, March 2019	168:p	0.5368054	0.3216254	0.0841083	0.9360022
Female, April 2019	169:p	0.4255521	0.2866215	0.0692619	0.880591
Female, May 2019	170:p	0.276	0.1800899	0.0611787	0.6904117
Female, June 2019	171:p	0.2039348	0.3455647	0.003935	0.9432208
Female, July 2019	172:p	0.6528696	0.1270685	0.3852636	0.8494917
Female, August 2019	173:p	0.6528699	0.0846463	0.4749263	0.7963662
Female, September 2019	174:p	1	0	1	1
